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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,916	03/28/2001	Robert C. Sundahl	INTL-0392-US(P8834)	4365

7590 10/07/2002

Timothy N. Trop
TROP, PRUNER & HU, P.C.
STE 100
8554 KATY FWY
HOUSTON, TX 77024-1805

EXAMINER

PHINNEY, JASON R

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 10/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/819,916	SUNDAHL, ROBERT C.	
	Examiner	Art Unit	
	Jason Phinney	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not fully identify the mailing or post office address of each inventor. A mailing or post office address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing or post office address should include the ZIP Code designation. The mailing or post office address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

More specifically, the oath or declaration is defective because it is missing the Zip Code from the post office address.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "attached to the frame" on Page 10 Line 2. There is insufficient antecedent basis for this in the preceding claims. A frame is not claimed to be a part of this invention until Claim 6.

Claim 17 recites the limitation "a transparent front surface" on Page 12 Lines 8-9. This indirectly further limits the "front surface that emits light" and it is not clear whether the claimed

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subject matter is intended to encompass all surfaces that emit light or only those that are also transparent.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,914,698 to Nicholson.

Nicholson discloses a flat panel display with a tiled array of display elements (See Figure 1, #12). Each display element has a front surface that emits light (Figure 3, #112), a back surface that does not substantially emit light (#24), a seam between adjacent display elements (Figure 2), and a strap attached to the back surface over the seams between display elements (#216).

4. Claims 2 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,914,698 to Nicholson.

Nicholson discloses the display of Claim 1 as described above.

Regarding Claim 2, Nicholson further discloses that there should be a plurality of straps over a plurality of seams (Figure 2, #216).

Regarding Claim 6, Nicholson further discloses a frame (Figure 2, #14).

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5. Claim 11 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent No. 5,914,698 to Nicholson.

Nicholson discloses a method of arranging an array of display elements (See Figure 1, #12) to produce a flat panel display. Each display element has a front surface that emits light (Figure 3, #112), a back surface that does not substantially emit light (#24), a seam between adjacent display elements (Figure 2), and a strap secured to the back surface over the seams between display elements (#216).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,914,698 to Nicholson in view of U.S. Patent No. 4,408,836 to Kikuno.

Nicholson discloses the flat panel display of Claims 1 and 2 as described above.

Regarding Claim 3, Nicholson does not exemplify that the straps should be perpendicular to each other.

Regarding Claim 4, Nicholson does not exemplify that the perpendicular straps are connected to one another.

Regarding Claim 5, Nicholson does not exemplify that the perpendicular straps are attached to the frame.

Kikuno, in the similar field of LCD displays teaches of using perpendicular straps (Figure 11, #41) that are connected to one another and also attached to the frame (#30) in order to secure the LCD display panels.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the display panel of Nicholson with the perpendicular straps of Kikuno in order to secure the display panels.

7. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,914,698 to Nicholson in view of U.S. Patent No. 6,343,862 to Sawai.

Nicholson discloses the flat panel display of Claims 1 and 2 as described above.

Regarding Claim 9, the straps of Nicholson redistribute a bending stress applied on the panels toward the front of the display as tension in the straps (Figure 2, #216).

Regarding Claim 10, the straps of Nicholson redistribute bending stress applied on the panels toward the rear of the display as compression in the straps (Figure 2, #216).

Regarding Claim 7, Nicholson does not exemplify that there should be an optical integrator attached to the front surface of the display.

Regarding Claim 8, Nicholson does not exemplify that the straps should redistribute the stress from an optical integrator to the straps.

Sawai, in the similar field of LCD displays teaches of using an optical integrator (Column 2, Lines 6-11) in order to make the light distribution more uniform. Were this integrator applied

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to the front panel of Nicholson's display then the straps would function to redistribute the stress from the display to the straps.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the display panel of Nicholson with the optical integrator of Sawai in order to create a display with a more uniform light distribution.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,914,698 to Nicholson in view of U.S. Patent No. 4,408,836 to Kikuno.

Nicholson discloses the flat panel display of Claim 11 as described above.

Nicholson does not, however, exemplify that the straps should be perpendicular to each other.

Kikuno, in the similar field of LCD displays teaches of using perpendicular straps (Figure 11, #41) in order to secure the LCD display panels.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the display panel of Nicholson with the perpendicular straps of Kikuno in order to secure the display panels.

9. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,914,698 to Nicholson in view of U.S. Patent No. 6,343,862 to Sawai.

Nicholson discloses the method of producing a flat panel display of Claims 11 as described above.

Regarding Claim 13, Nicholson does not exemplify that there should be an optical integrator attached to the front surface of the display.

Regarding Claim 14, Nicholson does not exemplify that the straps should redistribute the stress from the optical integrator to the straps; however the straps of Nicholson would perform this function should an optical integrator be attached to the front surface (Figure 2, #216).

Regarding Claim 15, while Nicholson does not exemplify the optical integrator, the straps of Nicholson would function to redistribute a bending stress applied on an optical integrator toward the front of the display as tension in the straps (Figure 2, #216).

Regarding Claim 16, while Nicholson does not exemplify the optical integrator, the straps of Nicholson would function to redistribute a bending stress applied on an optical integrator toward the rear of the display as compression in the straps (Figure 2, #216).

Sawai, in the similar field of LCD displays teaches of using an optical integrator (Column 2, Lines 6-11) in order to make the light distribution more uniform. Were this Integrator applied to the front panel of Nicholson's display then the straps would function to redistribute the stress from the display to either compression or tension in the straps.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the display panel of Nicholson with the optical integrator of Sawai in order to create a display with a more uniform light distribution.

10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,914,698 to Nicholson in view of U.S. Patent No. 4,408,836 to Kikuno.

Nicholson discloses a method of arranging an array of display elements (See Figure 1, #12) to produce a flat panel display. Each display element has a front surface that emits light (Figure 3, #112), a back surface that does not substantially emit light (#24), a seam between adjacent display elements (Figure 2), and a strap attached to the back surface over the seams between display elements (#216).

Nicholson does not exemplify that there should be a transparent front surface of the flat-panel display from which the stress should be redistributed to the straps; however, should a transparent front surface be placed over the multiple display panels then the straps would function to redistribute the stress.

Kikuno teaches of using a transparent front surface as a reinforcing plate (Figure 11, #25) to cover and protect the panel.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the display panel of Nicholson with the transparent front surface of Kikuno in order to reinforce and protect the flat-panel display.

11. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,914,698 to Nicholson in view of U.S. Patent No. 4,408,836 to Kikuno.

As described above, Nicholson in view of Kikuno teaches the method of claim 17.

Regarding Claim 18, while Nicholson does not exemplify the transparent front surface, the straps of Nicholson would function to redistribute a bending stress applied on such a transparent front surface toward the rear of the display as compression in the straps (Figure 2, #216).

Regarding Claim 19, while Nicholson does not exemplify the transparent front surface, the straps of Nicholson would function to redistribute a bending stress applied on such a transparent front surface toward the front of the display as tension in the straps (Figure 2, #216).

Regarding Claim 20 Nicholson does not exemplify that the straps should be adhesively secured to the display in a grid pattern.

Kikuno teaches of using a transparent front surface as described above as well as straps arranged in a grid pattern (Figure 11, #41) that are adhesively secured to the display (#'s 34 and 32) in order to secure the display panels together.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the display panel of Nicholson with the grid patterned, adhesively secured straps of Kikuno in order to secure the display panels.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Phinney whose telephone number is (703) 305-3999. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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JP

October 2, 2002


VIP PATEL
PRIMARY EXAMINER